

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Review of the Section 251 Unbundling)	
Obligations of Incumbent Local Exchange)	
Carriers)	CC Docket 01-338
)	
Implementation of the Local Competition)	
Provisions of the Telecommunications Act of)	
1996)	CC Docket 96-98
)	
Deployment of Wireline Services Offering)	
<u>Advanced Telecommunications Capability</u>)	CC Docket 98-147

**DECLARATION OF PEGGY RUBINO
ON BEHALF OF Z-TEL COMMUNICATIONS, INC.**

I, Peggy Rubino, do hereby declare:

1. I am Regional Vice President, Industry Policy for Z-Tel Communications, Inc.

My business address is 601 South Harbor Island Boulevard, Suite 220, Tampa, Florida 33602.

2. I hold a Bachelor of Science degree in mechanical engineering from Tufts University.

3. My job responsibilities at Z-Tel involve managing Z-Tel's wholesale relationship with incumbent local exchange carriers Verizon and BellSouth. Z-Tel currently offers competitive, residential local and long-distance service throughout both the former Bell Atlantic (now Verizon) and BellSouth regions. In addition, Z-Tel is currently rolling out our competitive service throughout the former GTE local exchanges that are now owned by Verizon. To provide our competitive local service to mass market consumers, Z-Tel relies upon the Unbundled Network Element Platform, or "UNE-P," to provide us the ubiquitous market presence needed to

offer competitive services to the mass-market. At the same time, Z-Tel is constantly exploring methods of lowering or controlling our costs and services.

4. Because my job involves all aspects of our relationship with Verizon and BellSouth, it is my responsibility to be aware of all current and relevant Verizon and BellSouth policies and practices.

5. Prior to joining Z-Tel in April 2000, I was a Telecommunications Policy Analyst IV at the New York State Department of Public Service (NYDPS). In that capacity, I worked in the Telecommunications Division for almost 10 years. During most of calendar years 1998 and 1999, my time at the NYDPS was consumed by the Section 271 “interLATA entry” process for New York Telephone Company, now known as Verizon – New York.¹ In particular, during the Summer and Fall of 1999, I was the principal NYDPS Staff member assigned to monitoring Verizon’s “hot cut” process. As will be discussed in more detail below, for a period of several months, I worked with the industry to devise proper hot cut processes, monitored Verizon’s compliance with that process, engaged in weekly and sometimes daily conference calls between Verizon and competitors, and ensured that proper procedures and reporting were undertaken.

6. The purpose of this declaration is to discuss the inherent limitations of the manual “hot cut” process and, in my opinion, its inability to support commercial volumes sufficient to support mass-market competition. Before beginning, I wish to stress that my conclusions are not to be taken as an indication that Verizon – New York has sabotaged or made the hot-cut process too difficult; indeed, to the contrary, I believe that Verizon – New York’s manual hot cut process may be as effective as any ILEC’s in the country. It is, however, my opinion that the current

¹ The Bell Operating Company once known as New York Telephone Company underwent several name changes during my tenure at the NYDPS. For clarity, throughout this Declaration I will refer to “Verizon” or “Verizon – New York”.

manual process for providing hot cuts simply cannot support the commercial volumes required for mass-market entry.

Hot Cuts: Manual Work Inside the Central Office

7. A “hot cut” is literally the process of disconnecting a loop with dialtone from one switch and reconnecting it to another switch. A cut is called “hot” because prior to the cut-over, the line has dialtone on it and, the customer will be out of service from the time the loop is disconnected from one switch until it is connected to another. As a result, timing and coordination of hot cuts is of utmost importance – because glitches or delays may cause the customer to be without service for an extended period of time.

8. My testimony today is limited to the provision of hot cuts for analog loops – those that are used to provide POTS (“Plain Old Telephone Service”) service. Each ILEC hot cut involves several steps. Attachment A to this Declaration is a chart of Verizon’s current hot-cut process that Verizon submitted to the FCC with its Section 271 application for New Jersey that lists the multiple steps involved in a hot cut. It is my understanding that Verizon follows this same hot-cut process throughout its Bell operating company territories.

9. The BellSouth “hot cut” process is similar, although BellSouth has not performed nearly as many hot cuts as Verizon has. Attachment B to my testimony is a visual description of the BellSouth process that was prepared by BellSouth itself and filed in BellSouth’s pending Georgia and Louisiana 271 application. Attachment C is a flow-chart of BellSouth’s hot-cut process that also was filed in the pending Georgia and Louisiana application.

10. Hot cuts are performed at the Main Distribution Frame (MDF) by ILEC technicians. Local loops – the copper wires that run to homes and businesses – enter a building

called the central office. A central office typically serves tens of thousands of analog loops. Some central offices in New York City support hundreds of thousands of loops.

11. All of these analog loops end on a Main Distribution Frame, or MDF. The MDF is, literally, a huge metal frame that has posts upon which each and every copper wire is tied.

12. When a switch is installed in a central office, each active port on that switch is wired to a post on the MDF by a copper wire. When the telephone company wants to connect a particular local loop to a particular switch port, a technician has to run another copper wire (called a “jumper”) from the post on which the loop terminates to the post where the switch port terminates.² This is a manual process. Attachment B shows that this process can involve finding and weaving a copper wire among hundreds, if not thousands of other copper wires. Once a jumper is connected, there is continuous, copper wire connection from the switch port to the local loop and ultimately the end-user’s telephone. The result of thousands of such connections is an intricate and complicated “weave” of loops and jumpers.

13. Because thousands of connections and jumpers are maintained on an MDF, these frames can be enormous. A picture of an MDF can be found in Attachment B. It is not uncommon for MDFs to span two stories of a central office, which requires the use of ladders to effectuate connections. And since jumpers must be installed manually by technicians, there is also an inherent limitation on the number of technicians that can be working on a MDF at any point in time.

² In the case of integrated digital loop carrier, there is no individual appearance on the frame for each loop. However, such loops cannot be “hot cut” at the DS-0 level. If a competitive carrier orders a hot cut of a line served via IDLC or similar digital loop carrier systems, the customer’s service must first be converted from IDLC to copper loops, and then the lines can be hot cut to the competitor’s switch. As a result, for IDLC lines, providing a CLEC an unbundled loop requires potentially even **more** manual work than the ILEC would face in connecting that line for itself. A significant and substantial number of loops are supported by IDLC or similar digital loop carrier systems. The percentage of DLC-fed loops in the incumbent LEC outside plant can vary significantly on a state-to-state basis.

CLEC Challenges in the Hot-Cut Process

14. When a CLEC collocates equipment at a central office, it will order a certain number of “terminations” on the MDF. Those terminations are, essentially, wires that run from posts on the MDF to the CLEC’s collocation space. If a CLEC wishes to provide analog dialtone service, it will order “DS0 terminations” – copper wires – that run from the MDF, through riser and racking, and to the CLEC collocation space. At that point, the copper wires will terminate on multiplexing and transport equipment which is then connected to the CLEC switch that is located in a different site.

15. The CLEC hot cut process is as follows. When a CLEC receives an order for service, it places an order for an unbundled local loop, combined with local number portability, with the incumbent LEC. This order is called a “Local Service Request”, or LSR. When the CLEC places that order, it must designate which termination on the MDF the unbundled local loop must be connected to.

16. This is the first hurdle and barrier CLECs face. Indeed, obtaining a sufficient number of terminations is an often-overlooked barrier to entry. These wires must run through riser space in the central office and on racking that is generally installed by the ILEC. ILECs are very protective of their riser space and racking space, because improper use of those scarce resources can lead to interference and cross-talk between connections. If a CLEC service offering is successful, it may need to augment its collocation capacity. A mass market service like Z-Tel’s would potentially require thousands of terminations in an office. If insufficient terminations are available, the CLEC cannot provide service to the end user unless UNE Platform/unbundled local switching is available.

17. When Verizon receives a complete LSR (that is, one with available termination and other information), it will forward internal service orders to its Facility Assignment, Regional CLEC Coordination Center (RCCC), and Recent Change Memory Administration Center (RCMAC) groups. The RCCC verifies the order once again and sends a work ticket to the appropriate MDF resource. That ticket will specify which particular loop is to be connected to which particular CLEC termination post. At roughly the same time, the local number portability process is begun, so that the customer will have the same telephone number once connected to the CLEC switch as when the loop was connected to the ILEC switch.

18. When a hot cut is performed, providing Local Number Portability (“LNP”) is a challenge because prior to the hot cut the public switched telephone network must associate the ILEC switch port connected to the loop with the customer’s phone number and immediately after the hot cut is performed the PSTN must associate the CLEC switch port connected to loop with the same phone number. One misstep in the process could result in the customer not receiving phone calls. The vulnerability of customers at this time is considerable and mismanagement can destroy a CLEC’s business reputation. If customers associate their cut-over to a CLEC with missed calls from customers or loss of dialtone, the reputation of that CLEC is harmed dramatically.

19. Prior to the date of the hot cut, an ILEC frame technician is supposed to confirm whether the CLEC switch port on the particular post of the MDF has dialtone. Confirming CLEC dialtone prior to starting the hot cut is crucial to making sure the customer does not lose service for any longer than necessary. If a customer’s line is cut over to a CLEC port that does not have dialtone, it is a virtual certainty that the customer will lose service.

20. On the hot cut due date, Verizon tries to obtain a final “go/no go” from the CLEC. If Verizon cannot reach the CLEC, the hot cut will not be performed. Only after final confirmation is obtained will Verizon perform the hot cut.³

21. In New York, Verizon has recently rolled out a web-based system for CLECs to track pending hot cuts, called WPTS. It is important to understand that WPTS is simply a tracking and communication medium – a method for CLECs to know how its hot-cuts are progressing through Verizon’s systems, identify any problems, and for the CLECs to provide feedback to Verizon. The actual hot-cuts performed by Verizon are still performed by manual labor at the central office as described above. It is those manual steps that create the primary limitations on the utility of hot-cuts for a company like Z-Tel seeking to provide mass market services using unbundled local loops. In addition, most ILECs do not even have a mechanized tracking system like WPTS.

22. As the above discussion makes clear, hot-cuts are a manual process. From an engineering standpoint, there are substantial limitations on the ability of any ILEC – even one with the best of intentions – to perform enough to support sufficient competition for mass market residential and small business consumers.

The New York Experience

23. As discussed above, from September, 1990 to April 2000, I worked at the New York State Department of Public Service, and a great deal of my time was spent observing and working with various parties to improve Verizon’s “hot-cut” process. I also supervised KPMG’s test of Verizon’s hot cut process, and accompanied KPMG on many hot cut observations at Verizon and CLEC hot cut coordination centers, as well as Verizon central offices. The New

³ Verizon’s recently introduced Wholesale Provisioning Tracking System (WPTS) allows participating CLECs to check the status of their hot cut orders and give the go-ahead for a cut via the internet instead of by phone.

York Commission recognized that hot-cuts would be an important component in local competition throughout the state and set out to address and fix as many issues as it could related to the hot-cut process.

24. At the same time, the New York Commission wanted to ensure that local competition addressed *all* telecommunications markets. The New York Commission felt that it was important that mass-market consumers (residential and small businesses) enjoy the benefits of service innovation and price options that competition would bring.

25. On April 6, 1998, New York Telephone Company (now known as Verizon – New York) filed a document called a “Pre-Filing Statement for Bell Atlantic – New York,” which set forth the terms in which Verizon would provide interconnection, unbundling and services to competitors as part of the New York Section 271 process. One of the commitments Verizon made in the Pre-Filing Statement was to provide CLECs “reasonable and non-discriminatory access to unbundled elements in a manner that provides competing carriers with the practical and legal ability to combine unbundled elements.” Bell Atlantic – New York Pre-Filing Statement at 10.

26. On May 6, 1998, the New York Commission initiated a proceeding, 98-C-0690, which was charged with examining the methods in which CLECs can obtain and combine unbundled network elements.

27. The outcome of this proceeding was directly tied to the availability of the UNE Platform in New York. In particular, Verizon stated that it will continue its “current, ubiquitous offering of the platform until such [alternative] methods for permitting competitive LECs to recombine elements are demonstrated to the Commission.” *Id.* at 10.

28. I was a lead New York Commission staffer assigned to Case 98-C-0690. Over several months, Verizon and competitors submitted plans and proposals to the New York Commission and a technical conference of expert witnesses was held, which generated a transcript of 784 pages. A copy of the New York Commission's order in this proceeding is attached as Attachment D, and a copy of Judge Eleanor Stein's recommended decision in this proceeding is attached at Attachment E.

29. Verizon's position in Case 98-C-0690 was that manual methods of combining loops and switching were sufficient to bring mass-market competition to New York. The New York Commission rejected those arguments. The New York Commission noted that "to be commercially reasonable, the menu [of access options] must allow a competitor to obtain and combine network elements on a scale that is consistent with current expectations of competitive demand volume." Attachment D at 8.

30. On November 23, 1998, the New York Commission found that Verizon's manual provisioning processes were insufficient to support mass market entry in New York. In particular, the New York Commission found that:

- The manual process for CLECs involving jumpers on the MDF required more facilities and was more complicated than the process for Verizon's retail customers. *Id. at 6-7.*
- The manual process involved potential for human error. Indeed, during a demonstration at the Technical Conference, Verizon's witness failed to complete a manual cross-connection on his first attempt. Attachment E at note 3.

- Relying on collocated CLEC switches raises potential for exhaustion of collocation space and cost of collocation. Attachment D at 8.

31. Judge Stein recommended that “as a matter of fact,” none of the manual alternatives for connecting loops proposed by Verizon were sufficient to provide competitors a “commercially reasonable and nondiscriminatory” method of access with respect to “ubiquity, cost, timely provision, service quality, and reliability.” Attachment E at 10. Judge Stein noted that the record in this proceeding shows “unequivocally that Bell Atlantic-New York’s options alone, absent provision of the platform (or another electronic or otherwise seamless and ubiquitous method), are unacceptable to support combination of elements to serve residential and business customers on any scale that could be considered mass market entry.” *Id.* In its Order in this proceeding, the New York Commission adopted Judge Stein’s recommendation and ordered that Verizon continue to provide access to the UNE Platform. The New York Commission specifically noted: “This Commission has long been committed to the development of a fully competitive local exchange market; to wit, multiple carriers providing a full range of services throughout New York State. Such a market cannot develop unless customers are able to switch easily to the local exchange provider offering the service, price and quality options that best meets their needs.” Attachment D at 35.

32. In Case 98-C-0690, the New York Commission thus concluded that manual provisioning processes of combining unbundled loops with switch ports were insufficient to support entry at the scale necessary for mass-market competition. Availability of the UNE Platform was considered to be necessary to provide this type of ubiquitous choice. The New York Commission recently reiterated that position in Cases 98-C-1357/01-C-1945, where the Commission, Verizon and competitors (including Z-Tel) entered into a settlement which assured

the statewide availability of UNE Platform in throughout New York State, regardless of the FCC's decision in this proceeding. As discussed in Z-Tel's Comments, the New York Commission noted that alternative methods of entry were not sufficiently robust or ubiquitous so as to provide mass-market competition statewide.

The Impact Limited Hot-Cuts Have on Entry

33. In Spring 2001, Z-Tel began exploring whether it would be cost-justified to self-provide switching in New York City, LATA 132. Z-Tel had been providing competitive residential service in LATA 132 since Summer 1999 and had acquired over 100,000 customers. An opportunity to obtain a Class V switch and collocation sites from a soon-to-be-bankrupt CLEC arose and Z-Tel actively explored the possibility of putting its existing and future customers on this switch through Verizon hot-cuts. Given my experience with this market and with hot-cuts, I was tasked with trying to find out how quickly Z-Tel could move its customers from Verizon's switch to its own.

34. Z-Tel determined that the hot cut cost and the length of time it would take us to migrate customers to our switch would be a significant and substantial barrier to obtaining the full-utilization of this Class V switch. We discovered that even if we owned this switch, we would still require access to UNE Platform to service most of our customers for a significant period of time while we converted our customer base from the UNE platform to our switch.

35. It is my understanding that Verizon organizes "project" hot cuts – utilized for migrations of larger customer groups – as follows. Verizon has divided the entire former NYNEX region (New York, Massachusetts, Connecticut, Rhode Island, Vermont, New Hampshire, and Maine) into forty geographical areas. According to FCC 2001 ARMIS 43-08 reports, that region contains over 15 million analog business and residential lines. A "project," I

was told, would generally consist of 100-150 lines, although Verizon would consider projects involving fewer lines. Verizon indicated to me that for the entire CLEC industry, they would do one project per geographic area per day. In other words, if Z-Tel and another CLEC were doing projects in the same geographic area, both cuts could not be done in the same night. Verizon also indicated that no hot cuts (outside the project process) should be scheduled for five days before or five days after any hot cut project in a given central office.

36. I attempted to learn from Verizon the approximate total number of hot-cuts that Z-Tel could expect on a monthly basis. Verizon did not provide a specific figure for an overall maximum number of monthly hot cuts. Based on our review of Verizon's practices and "project" hot cut guidelines, however, as well as the need to coordinate those hot cuts internally, and the requirements that adhering to those guidelines would place upon Z-Tel's provisioning procedures, we concluded that Z-Tel should only reasonably expect and plan to obtain from Verizon 4,000 hot cuts per month in LATA 132. I believe this assumption to be reasonable. Notably, 4000 hot cuts per month would represent a substantial share of the total number of hot cuts that Verizon was (and is) providing on a monthly basis throughout all of New York.

37. It is important to note that Z-Tel would have to "share" this theoretical hot-cut capacity with other CLECs throughout the entire Verizon region. As noted above, Verizon will only perform one hot cut project per geographic area per day. Accordingly, Z-Tel's hot-cut orders would have to be queued up on a central office-by-central office basis, and could potentially be delayed weeks or even months. This queuing process substantially reduces the financial benefit of self-providing switching – because Z-Tel would be paying for unbundled local switching while its self-provided switch would remain at undercapacity. The length of time in which Z-Tel would have to double-pay for switching is also highly unpredictable because all

similarly-situated CLECs would be sharing the same Verizon hot-cut capacity. This means that our orders would run the risk of delay solely because another CLEC with a large quantity might be in the queue in front of us.

37. In short, even run at its most efficient (and optimistic) levels, the Verizon manual hot cut process requires an entrant like Z-Tel to continue to have access to UNE-Platform to serve its customers while hot cut orders are in the queue. While an order is pending, Z-Tel does not obtain immediate benefit from owning its own switch – to the contrary, Z-Tel’s cost structure is much worse because while the order is queued, Z-Tel is *double-paying* for switching, as it must purchase unbundled switching from the ILEC while still owning a switch port for that customer.

38. In the end, Z-Tel would have been just as dependent upon the ILEC for provisioning of UNE Platform as we had been prior to switch deployment. In fact, we would have been *more* dependent on the ILEC because not only would we have had to rely on UNE Platform for most of our customers, we also would have been at the mercy of ILEC frame technicians (as well as on Z-Tel technicians that we would have to hire and train to coordinate the process) and of smooth operation of the hot-cut process to service all our customers. Z-Tel would have vastly increased its provisioning costs per line (because it would have to support two methods of entry, each with their own particular issues and ambiguities). Z-Tel’s customer service costs would also have increased substantially. For each problem reported by one of our customers, the customer service representative would have had to first determine whether the individual line was served via our switch or Verizon’s, and would then have had to use different systems to test the line and dispatch a technician depending upon which switch was serving that customer.

39. Finally is the matter of the cost of the hot cuts themselves. When we reviewed switch deployment in New York in Spring 2001, we assumed a “hot cut” rate of \$25-30 each to be paid to Verizon. If we assumed that Z-Tel would be able to get 4,000 hot-cuts per month, simply the cost of those hot cuts would rival the cost of buying the switch -- \$100,000-120,000 per month, or \$1.2-1.44 million per year. Earlier this year, in case 98-C-1357, the New York Commission approved a much-higher hot-cut rate of \$185 each. The New York Commission derived this rate based upon the fact that a hot-cut is a manual and time-consuming process – as a result, a large part of this cost is payment of the wage rates for Verizon technicians. At \$185 each, 4,000 hot cuts per month would be *\$740,000 per month*. To cut over 100,000 customers to a switch would cost *\$18.5 million*. By way of comparison, at the end of Calendar Year 2001, Z-Tel had only \$18.89 million in cash and cash equivalents. That is, to cut over not even half of our customer base at the cost-based rate established by the New York Commission would drain Z-Tel of virtually all of its cash.

Summary and Conclusions

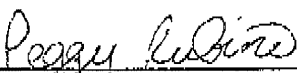
40. While the manual hot-cut process certainly has its place in local competition, by no means can it be considered a substitute for UNE Platform/unbundled local switching for a company like Z-Tel that seeks to provide mass-market residential and business services.

41. At present, there is no getting around the fact that in central offices, to connect an unbundled loop to CLEC collocated equipment, a manual process involving ILEC and CLEC technicians must be undertaken. That process is time-consuming and expensive. In addition, mass-market competition requires a service provider like Z-Tel to support significant customer churn. Mass market entry requires a massive amount of customer conversions – hundreds of thousands per month. Even in a market like New York City, where the incumbent has more

experience with hot-cuts than other BOCs, Verizon cannot provide hot-cuts in sufficient quantity to support mass market entry. As a result, the New York Commission recently concluded that unbundled local switching and UNE Platform should continue to be available statewide and even expanded its availability. In the current proceeding, the Federal Communications Commission should follow this lead and do the same.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 5, 2002 by:



Peggy Rubino